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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,337	11/28/2001	Pary Baluswamy	4307.1US (99-1193.1)	6253

24247 7590 06/20/2002

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EXAMINER

PIZARRO CRESPO, MARCOS D

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 06/20/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,337

Applicant(s)

BALUSWAMY ET AL.

Examiner

Marcos D. Pizarro-Crespo

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Attorney's Docket Number: 4307.1US (99-1193.1)

Filing Date: 11/28/2001

Claimed Priority Date: 8/30/2000 (Divisional 09/651,790)

Applicant(s): Baluswamy et al.

Examiner: Marcos D. Pizarro-Crespo

DETAILED ACTION

This Office action responds to the application (Ser. No. 09/996,337) filed on 11/28/2001.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9 and 11-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kinoshita (JP 58-90728).

3. Kinoshita shows (see, e.g., figs. 1 and 2) all aspects of the instant invention including an overlay target comprising a trench **4** including a series of raised lines.

4. Regarding claims 2 and 4, Kinoshita shows the trench **4** as a continuous trench defining a geometric shape (see, e.g., fig. 1).

5. Regarding claim 3, Kinoshita shows the overlay target further comprising a plurality of trenches (**4, 5**), each of the trenches including a series of raised lines.

6. Regarding claim 5, Kinoshita shows (see, e.g., figs. 4 and 5) an overlay target comprising a pad area **43** including a series of raised lines.

7. Regarding claim 6, Kinoshita shows the overlay target further comprising a plurality of pad areas (**43, 44**), each of the pad areas including a series of raised lines.

8. Regarding claim 7, Kinoshita shows the overlay target further comprising a trench **41** including a series of raised lines.

9. Regarding claim 8, Kinoshita shows (see, e.g., figs. 1, 2, 4 and 5) a semiconductor wafer comprising a semiconductor substrate **1** and an overlay target comprising a series of raised lines.

10. Regarding claim 9, Kinoshita shows that the series of raised lines may be etched into the semiconductor substrate **1** (see, e.g., figs. 2 and 5).

11. Regarding claim 11, Kinoshita shows the series of raised lines disposed in a trench **4** (see, e.g., figs. 1 and 2).

12. Regarding claim 12, Kinoshita shows a plurality of trenches (**4, 5**) with a corresponding series of raised lines defining the overlay target (see, e.g., figs. 1 and 2).

13. Regarding claim 13, Kinoshita shows the series of raised lines disposed in a pad area **43** (see, e.g., figs. 4 and 5).

14. Regarding claim 14, Kinoshita shows a plurality of pad areas (**43, 44**) with a corresponding series of raised lines defining the overlay target (see, e.g., figs. 4 and 5).

15. Regarding claim 15, Kinoshita shows the series of raised lines comprising a first series of raised lines disposed in a pad area **43** and a second series of raised lines disposed in a trench **41**.

16. Claims 8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Deguchi (JP 62-18714).

17. Deguchi shows (see, e.g., fig. 2) all aspects of the instant invention including a semiconductor wafer comprising a semiconductor substrate **10** and an overlay target comprising at least one series of raised lines.

18. Regarding claim 10, Deguchi shows the series of raised lines etched into a material layer **27** overlying the semiconductor substrate **10**.

Conclusion

19. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. Papers should be faxed to Art Unit 2814 via the Art Unit 2814 Fax Center located in Crystal Plaza 4, room 3C23. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2814 Fax Center number is **(703) 308-7722** or **-7724**. The Art Unit 2814 Fax Center is to be used only for papers related to Art Unit 2814 applications.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Marcos D. Pizarro-Crespo** at **(703) 308-6558** and between the hours of 9:00 AM to 7:30 PM (Eastern Standard Time) Monday through Thursday or by e-mail via Marcos.Pizarro@uspto.gov. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri, can be reached on (703) 306-2794.

21. Any inquiry of a general nature or relating to the status of this application should be directed to the **Group 2800 Receptionist** at **(703) 308-0956**.

Art Unit: 2814

22. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass(es): 257/797; 438/401,462,975	6/5/2002
Other Documentation:	
Electronic Database(s): EAST (USPAT, EPO, JPO)	6/5/2002

**Olik Chaudhuri**

Supervisory Patent Examiner
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